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FINAL EXAMINATION

DCS5018 – COMPUTER SYSTEMS & APPLICATIONS
(DIT Students)

30 MAY 2018
9.00 a.m. – 11.00 a.m.
(2 Hours)

INSTRUCTIONS TO STUDENT:

1. This question paper consists of 9 pages with 40 Multiple Choice Questions and 4 structured questions.

2. **SECTION A**: Answer **ALL** questions. Please shade your answers on the OMR sheet provided.

3. **SECTION B**: Answer **ALL** questions. Please write your answers in the answer booklet provided.

SECTION A: MULTIPLE CHOICE QUESTIONS (40 MARKS)

Answer ALL questions in this section. Shade your answers on the OMR sheet provided.

1. In binary language, characters, computer instructions or other data are made up of a unique combination of eight _____.

    A. bits
    B. bytes
    C. characters
    D. kilobytes

2. Which of the following is **NOT** one of the criteria when making decision to buy an inkjet printer?

    A. Affordable
    B. Portable
    C. Quick and quiet
    D. High-quality colour

3. Which of the following is **NOT** an input device or game controller?

    A. Gamepad
    B. Steering wheels
    C. Gaming mouse pad
    D. Mechanical keyboard

4. Which of the following is **NOT** a cloud storage provider?

    A. Google Drive
    B. Microsoft OneDrive
    C. Intuit Storage
    D. MEGA

5. Based on the URL below, which of the following is the top-level domain?

    `https://www.mmu.edu.my/melaka/`

    A. https
    B. mmu
    C. edu.my
    D. melaka

6. A _____ is a personal journal posted on the web.

    A. blog
    B. podcast
    C. wiki
    D. webcast

Continued...

7. _____ engines search other search engines rather than individual websites.

    A. Metasearch
    B. Websearch
    C. Enginesearch
    D. Serversearch

8. Which of the following statement is **NOT** correct in describing email in general?

    A. Not suitable for private conversation
    B. Synchronous, so users can communicate at the same time
    C. Convenient for exchanging documents through attachment
    D. Written message sent and received over the Internet

9. Which of the following is an example of a general productivity software application?

    A. Adobe Photoshop
    B. Microsoft Visio
    C. OpenOffice Calc
    D. Intuit TurboTax

10. Which of the following is **NOT** a database software?

    A. Oracle
    B. MySql
    C. Writer
    D. Microsoft Access

11. A(n) _____ allows someone to use software for free.

    A. retail license
    B. proprietary software license
    C. subscription
    D. open source software license

12. Which of the following is the **uncompressed** audio file format?

    A. mp3
    B. acc
    C. wma
    D. wav

Continued...

13. Which of the following is the correct order for boot process when starting the computer?

    i.   Checking further configurations and customizations
    ii.   Performing power on self-test (POST)
    iii. Load OS to RAM
    iv. CPU activates BIOS

    A. iii, ii, iv, i
    B. ii, iii, iv, i
    C. iv, ii, iii, i
    D. i, iv, iii, ii

14. Without _____, the computer would not know how to operate or control the new piece of hardware that is attached to it.

    A. multitasking
    B. a graphical user interface (GUI)
    C. device drivers
    D. an application programming interface (API)

15. System _____ is a utility program that returns your operating system to a previous stable state.

    A. Return
    B. Backup
    C. Restore
    D. Fall Back

16. Which of the following is the extension file name for Microsoft Excel 2007 or later?

    A. docx
    B. xlsx
    C. accdb
    D. pptx

17. In the _____ process, the CPU retrieves an instruction from the main memory.

    A. pipelining
    B. instruction
    C. execution
    D. fetch

Continued...

18. Some processors can be forced to run at speeds higher than it was designed. This is known as _____.

    A. superclocking
    B. overclocking
    C. throttling
    D. turboclocking

19. In term of access speed, which of the following storage system is the fastest?

    A. SSD
    B. RAM
    C. Virtual Memory
    D. Level 2 Cache

20. Which of the following is **TRUE** about mechanical hard drive?

    A. Data saved as pattern of magnetized spots of 1s and 0s
    B. Generate little heat
    C. Run with no noise
    D. Require little power

21. Wireless networks generally have decreased throughput compared with that of wired networks. Which of the following is a **FALSE** statement regarding decreased wireless network throughput?

    A. Wireless signals are more susceptible to interference from magnetic and electrical sources.
    B. Certain building materials and metal can decrease throughput.
    C. Throughput varies depending on the distance between your networking equipment.
    D. Other wireless networks do not interfere with the signals on your network.

22. Which of the following is considered a node in a computer network?

    A. Computer
    B. Peripheral
    C. Network device
    D. All of the above

23. Which of the following statements is **FALSE** about P2P networks?

    A. They can only support a small number of devices.
    B. The services and security are centralized.
    C. All computers are considered equal.
    D. They can share a printer.

Continued...

24. In order to connect peripherals within a short distance, you would use the _____ wireless technology.

    A. Ultraviolet
    B. Bluetooth
    C. Infrared
    D. RFID

25. What is a system of access control that allows only limited use of material that has been legally purchased?

    A. DDM
    B. DRM
    C. DDR
    D. MDR

26. Which of the following is an example of a digital music file format?

    A. .avi
    B. .jpg
    C. .aac
    D. .accdb

27. _____ is the process of converting a song from a CD to a digital MP3 file.

    A. Ripping
    B. Copyright
    C. Codec
    D. Resolution

28. Which of the following is **FALSE** regarding the Protection of Digital Property?

    A. Photos should be considered copyrighted.
    B. Fair use provides a way for people to use portions of a copyrighted work.
    C. Software piracy is illegally using copyrighted software.
    D. Music and video violations may provide free publicity.

29. Which of the following describes the type of viruses called logic bomb?

    A. Execute when the computer boots up
    B. Execute when certain conditions are met
    C. Spread as attachment to email
    D. Spread on their own without human interaction

Continued...

30. Which of the following is the type of hackers that breaks into systems for non-malicious reasons such as to test system security vulnerabilities?

A. White-hat hackers
B. Red-hat hackers
C. Grey-hat hackers
D. Black-hat hackers

31. Which of the following is **NOT** a type of Biometric Authentication?

A. Face recognition
B. Voice authentication
C. Iris recognition
D. PIN Number

32. Which of the following statements best describes the Denial-of-Service?

A. Legitimate users are denied access to a computer system.
B. Software that runs on servers searching for vulnerabilities.
C. Unwanted program that downloads with other software from the Internet and runs in the background
D. Malicious code planted on your computer to gather information

33. Which of the following is the last step in the Program Development Life Cycle (PDLC)?

A. Documentation
B. Debugging
C. Coding
D. Problem statement

34. When designing an algorithm involving a loop, it consists of three elements: a(n) _____, a set of actions to be performed, and a test condition.

A. class
B. initial value
C. operator
D. documentation plan

35. Which of the following does the statement below refer to?

"Programmers identify all categories of inputs (or classes) needed for the program to solve a problem."

A. Object Oriented Analysis
B. Top-Down design
C. Compilation
D. Problem statement

36. What is the term used in programming languages that use decisions to redirect the flow of a program?

A. pseudocode
B. control structures
C. flowcharts
D. operators

37. Which of the following is **NOT** the general function of information systems?

A. Acquiring data
B. Processing data into information
C. Storing the data
D. Manage and tune the computer hardware

38. Which of the following correctly describes data integrity?

A. Data is accurate and reliable
B. Data in centralized
C. Data can be manipulated or processed
D. Data must be organized efficiently

39. A _____ provides timely and accurate information that enables managers to make critical business decisions.

A. office support system
B. transaction-processing system
C. decision support system
D. management information system

40. Which of the following is **NOT** a main component of a database?

A. Field
B. Record
C. Report
D. Table

Continued...

SECTION B: STRUCTURED QUESTIONS (60 MARKS)

Answer ALL questions in this section. Write your answers in the answer booklet provided.

QUESTION 1   **(15 MARKS)**

a. What is Internet Protocol Address?   **[2 m]**

b. Describe **TWO** differences between LCD and LED display technologies.   **[8 m]**

c. Below is the email written by a student to a lecturer. Based on this email, how would you advise the student to improve the email writing. Describe at least **FIVE** email etiquettes or guidelines for the student to follow.   **[5 m]**

From: Student A [mailto:111122222@student.mmu.edu.my]
Sent: Tuesday, 20 February, 2018 12:55 PM
To: Suhaimi Sarip <suhaimi2.sarip@mmu.edu.my>
Subject: Re: sorry sir Im your FYP1 student send ERD diagram but lost my email hahaha. If anuthing PLMK at this email ASAP!

On Fri, Feb 2, 2018 at 8:41 PM, Student A <111122222@student.mmu.edu.my> wrote:

QUESTION 2   **(15 MARKS)**

a. Compare between Local Area Network (LAN) and Wide Area Network (WAN) and give **ONE** example for each network architecture.   **[5 m]**

b. Recommend **FIVE** ways to strengthen your home wireless network security and justify your answers.   **[10 m]**

Continued...

QUESTION 3   **(15 MARKS)**

a. Recently, you may have noticed that many websites have pop up warning about their website usage of browser cookies. This is due to the Cookie Law enforced by the European Union (EU). Explain what a browser cookie is and how does it affect users.

[5 m]

b. In 2017, a ransomware called *WannaCry* hit Malaysian companies and companies around the world. Recommend **FIVE** strategies to avoid such attack and explain how these strategies can prevent other malicious attacks in the future.   [10 m]

QUESTION 4   **(15 MARKS)**

a. Explain the difference between data redundancy and data inconsistency. Give **ONE** example on how data redundancy and data inconsistency can happen.   [4 m]

b. What is the main purpose of Decision Support System and how does it help manager or a leader to make business decisions?   [5 m]

c. Compare the following modern computer languages in term of their application and area of usage for each computer language.   [6 m]

C++	Visual Basic	Ajax

End of Page.